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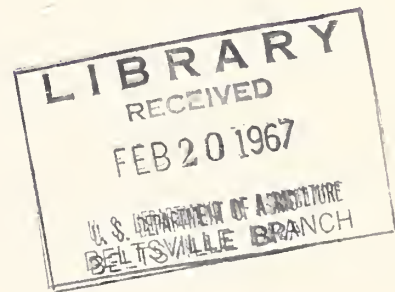Do not assume content reflects current
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PRICE SPREADS FOR PORK

Economic Research Service
U.S. Department of Agriculture

PREFACE

This report analyzes the trend of prices and price spreads for pork at various stages in the marketing process during 1949-66, and discusses the factors responsible for the trend and their implications for producers and consumers. The report supersedes "Pork Marketing Margins and Costs," Miscellaneous Publication No. 711.

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January 1967

HIGHLIGHTS

The difference between what the farmer receives per pound for hogs and what the consumer pays per pound for retail pork cuts increased 5.8 cents between 1949 and 1965, then increased 4 cents between 1965 and 1966. In 1949, the difference between farm and retail prices represented 40 percent of the consumer's dollar spent for pork, in 1965 it represented 43 percent, and in 1966, 49.8 percent. The 9.8-cent increase in the farm-retail spread between 1949 and 1966 resulted from an 8.6-cent increase in the wholesale-retail spread, and a 1.2-cent increase in the farm-wholesale spread.

The farm-retail spread for pork increased at about the same rate as the spread for beef between 1949 and 1959. However, from 1959 to 1965 the spread for pork remained fairly constant while the spread for beef continued to increase. In 1966, the pork spread again increased.

Although the general trend from 1949 to 1959 was upward, price spreads for pork often varied greatly from month to month. Most of these short-term variations were caused by changes in the supply of hogs. Since retail pork prices adjust to supply changes more slowly than live-hog prices, the ensuing lag causes price spreads to behave erratically in the short run.

The examples included in this report of individual marketings of hogs and pork demonstrate that differences between live-hog costs and retail selling prices can vary greatly, yielding different returns from similar services at different times. To the livestock producer, these examples indicate that the timing of purchases and sales is an important factor affecting net returns. To the consumer, they show how the cost of marketing services--transportation, slaughtering, distribution, and retailing--affect the retail price of pork.

PRICE SPREADS FOR PORK

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INTRODUCTION

Since the days when the Midwest was the agricultural frontier of a new and expanding Nation, hog and pork production have been important agricultural enterprises. Hog production developed along with the remarkable productive capacity of the Corn Belt, providing the framework for the early Corn Belt economy. There was a ready market for pork, both fresh and cured. Lard was the commonly used cooking fat; ham and bacon, at first delicacies, became the standard American breakfast; and cured or salted pork were standard provision for the military and other world travelers. Pork was more than a staple--the meat was prized. Pork loin even symbolized good eating in the well-known phrase, "eating high on the hog."

In this century, other products have replaced lard as the primary cooking fat; beef has replaced some pork on consumers' tables; fresh, frozen, and cured meats of many varieties are available to travelers; and, in general, dietary preferences are for less pork than before. However, in spite of the decrease in the demand for pork, as much as half the total corn production is fed to hogs today.

A few representative figures will serve to illustrate the downward trend in pork consumption. Consumption of red meat rose to a high of 175 pounds per person in 1964, an increase of 21 percent since 1949. Pork consumption dropped from 52 percent of the total in 1951 to 37 percent in 1964 (fig. 1), while beef increased from 41 to 57 percent between 1951 and 1964. In 1966, the consumption of red meat fell to 168 pounds per person, and pork consumption dropped to 34 percent of this total.

Hog production is concentrated in the Corn Belt, but the more than $3.7 billion cash income from the sale of hogs in 1965 made up an important share of the farm income in many other areas as well. A variation in hog prices is of real and immediate concern to many thousands of farm families in all parts of the United States.

Consumers and hog producers have an economic interest in the relationship between live hog and pork and pork product prices. Changes in marketing and processing costs, other things being equal, result in changes in either retail prices of pork and pork products or the price of live hogs, or both. These marketing and processing costs and the factors that affect them (both immediately and in the long run) are the subject of this report.

Price spreads for pork have been computed since the early twenties, when Congress asked the Department of Agriculture to undertake special studies of marketing margins for livestock. In 1934, at the request of livestock producers, the

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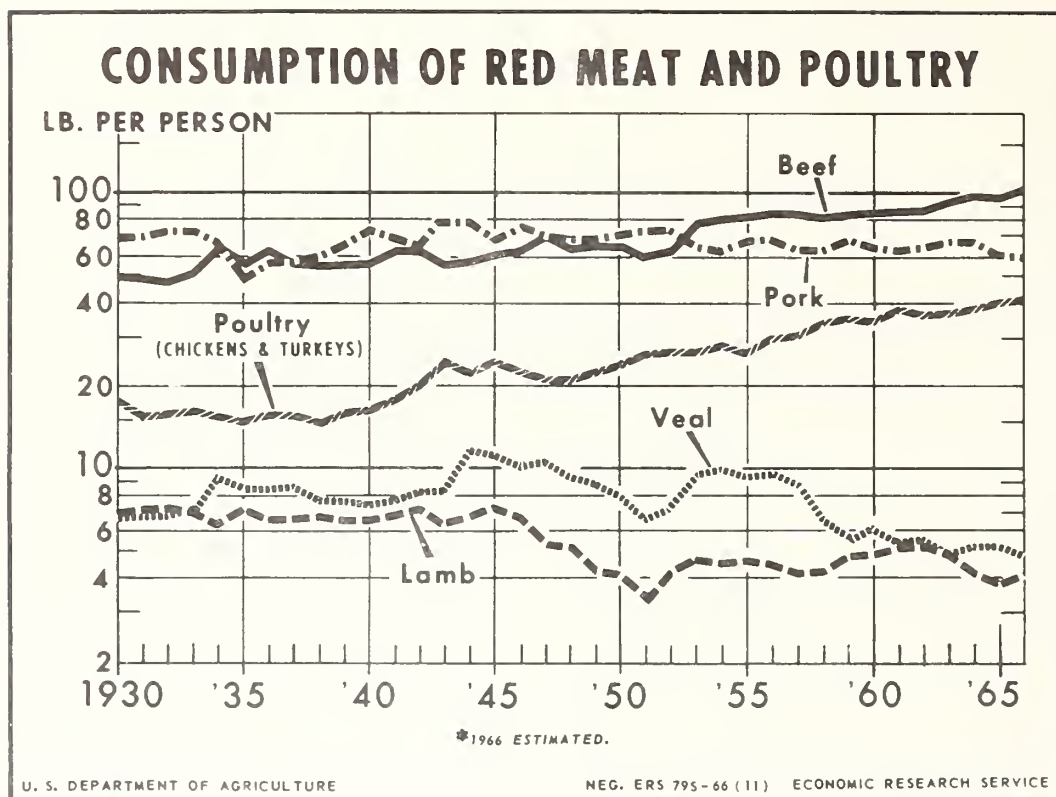
Figure 1

Department developed a statistical series to measure changes in marketing costs for a number of agricultural commodities. In March 1935, the Department published a preliminary report which summarized price spreads for 10 farm produced food products for the period 1910 to 1934. Pork was one of these products. In 1936, the Department issued a report on price spreads for 58 food items, including pork. Since 1941, farm-retail price spreads for pork and beef have been published periodically.

THE NATURE OF PRICE-SPREAD DATA

Price spreads for pork are differences between prices at three marketing levels--farm (live hogs), wholesale (wholesale pork cuts), and retail (retail pork cuts).[1] From these prices, three price spreads can be estimated-- farm-wholesale, wholesale-retail, and farm-retail.

Costs of factors such as labor or individual marketing functions--transportation, storage, risk bearing, processing, and so on--cannot be measured or estimated from price spread

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[1] All 1966 prices and price spread data in this report are an average of the first 9 months of the year. For sources of price data, see footnotes, table 3, page 13.

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data. Nor is it possible, using price spreads, to measure the gross or net return received by different marketing agencies such as commission men, brokers, wholesalers, or meat packers. Also, it is not possible to estimate the price spread for additional stages in the marketing process because (1) transfer of ownership does not take place and prices are not established, or (2) ownership transfers are so infrequent that prices are not reported.

Price spreads are estimates rather than precise measurements; and price-spread trends are, therefore, more reliable than a specific spread at one point in time. Although price spreads are a measure of the gross return per unit to the marketing and processing industries for their services, they only roughly indicate costs of these services since they include profits as well as all the costs of processing and marketing. Changes in either the marketing and processing costs or the profit structure of an industry can cause changes in price spreads, and the spreads will not indicate which factor or combination of factors caused the change.

Prices at the three marketing levels are not directly comparable. First, no such thing as a single retail or wholesale price for pork exists. Therefore, in order to estimate price spreads at these levels, the weighted average of the price per pound of several pork cuts is used (table 1 and fig. 2). Second, when a farmer sells a hog, he receives the same price for each pound; but the actual value of the hog arises from two sources--meat and byproducts. To obtain a liveweight value comparable to wholesale and retail prices, the value of byproducts is estimated and subtracted. Third, it takes about 2 pounds of live hog to make 1 pound of wholesale and retail cuts. To compensate for this, in price-spread comparisons the value of 2 pounds of live hog (minus byproduct credit) is used to equal the net farm value of 1 pound of retail pork cuts.

A carcass weighs about three-fourths as much as the live hog, yielding a number of byproducts upon further processing. One

TABLE 1.--Retail price per pound of specified pork cuts, U.S. average, August 1966

Pork cut	Price per pound
Fresh:	Dollars
Center cut pork chops.	1.09
Loin-end roast	.73
Rib-end roast	.67
Spareribs	.80
Neckbones	.31
Butts	.69
Pork sausage, bulk	.59
Cured:	
Bacon, sliced	.95
Bacon, squares	.59
Hams, whole.	.71
Ham, shank end	.61
Ham, butt end	.69
Ham, center slices	1.25
Picnics	.53

such byproduct is lard. Although some of the edible byproducts are sold through the same channels as the carcass, they are not considered directly in the price spread data, but are included in the category of byproducts.

The loss in weight at the retail level from cutting and trimming is less for pork than for other kinds of meat because most of the breaking of the carcass into primal cuts, boning, cutting, and trimming is done by the packer or wholesaler. Only a few pork cuts are sold fresh; most of the pork carcass is cured and processed--operations that packers are able to do at least as efficiently as retailers. Because of this, a pound of pork at the wholesale level yields approximately a pound of pork at retail. Therefore, no weight adjustment is necessary for the comparisons of wholesale and retail pork prices.

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MAJOR RETAIL PORK CUTS

	% OF CARCASS
HAM	18
LOIN	15
BACON	15
SPARERIBS	3
BUTTS	6
PICNIC	8
JOWL (BACON SQUARES)	3

TOTAL SALABLE RETAIL CUTS 68
LEAN TRIMMINGS (SAUSAGE)... 8
LARD 17
BONES AND WASTE 7

TOTAL   100

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Figure 2

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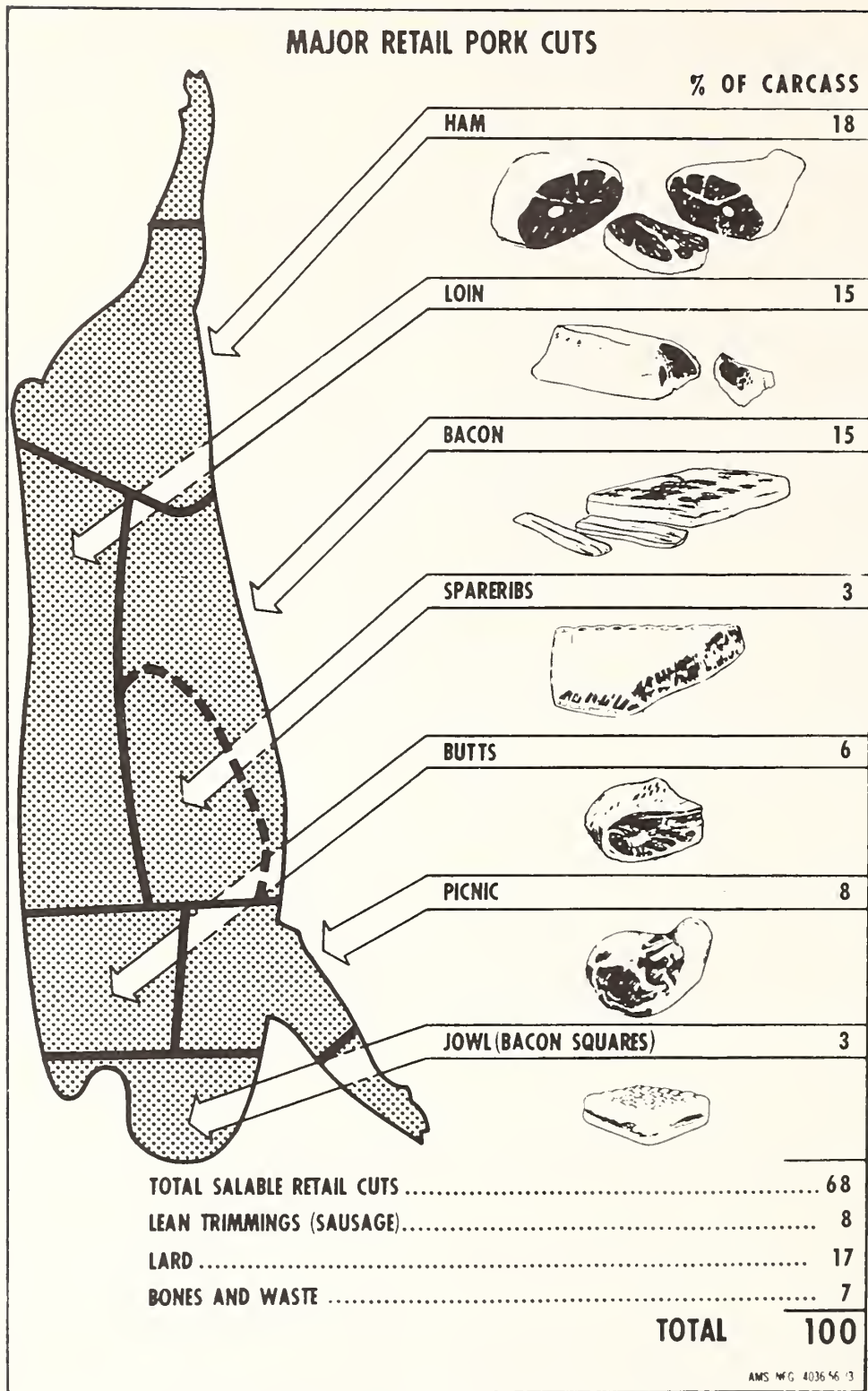
FLUCTUATIONS IN PORK PRODUCTION AND PRICES

Retail, wholesale, and farm prices of pork tend to have similar patterns which rise and fall steadily over time (fig. 3). However, the spread between hog and pork prices has increased since 1949. Prices at farm, wholesale, and retail levels respond individually to the forces of supply and demand at their respective levels of the marketing system, and while supply and demand at each level are highly interrelated, they are not synchronized. In the short run, unequal adjustments at the three levels give rise to unequal price adjustments, and result in widely fluctuating price spreads from month to month.

seasonal low in July and August to a peak in November and December, when the main part of the spring pig crop is marketed. This is followed by a decline to the summer low. The decline is slowed somewhat in the spring when the marketings of fall pigs are largest.

The seasonal high in live-hog prices is usually associated with the seasonal low in marketings. Wholesale and retail pork prices have the same general pattern as live-hog prices, but the degree of variation and the timing of high and low points differ.

Farm prices fluctuate seasonally more than wholesale or retail prices (fig. 4). In 1949-59,

RETAIL PRICE, WHOLESALE VALUE AND NET FARM VALUE OF PORK

¢ PER LB.

Retail price*

Wholesale value△

Net farm value○

1949 1952 1955 1958 1961 1964

*AVERAGE PRICE OF 1 POUND OF RETAIL PORK CUTS
▲AVERAGE PRICE OF 1 POUND OF WHOLESALE PORK CUTS.
○AVERAGE PRICE OF 2 POUNDS OF LIVE HOG LESS THE VALUE OF BYPRODUCTS.

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Figure 3

Seasonal Variation

Pork production and prices are characterized by rather striking seasonal patterns (fig. 4). Pork production rises sharply from the

farm prices tended to reach a high in July, corresponding to the seasonal low in production, and to reach a low during November and December. Wholesale prices tended to peak in August, 1 month later than farm prices, and

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SEASONAL VARIATION IN PORK PRODUCTION AND PRICE SPREADS

% OF ANNUAL AVERAGE

PORK PRODUCTION

1949-59

1960-65

FARM-WHOLESALE SPREAD

FARM-RETAIL SPREAD

WHOLESALE-RETAIL SPREAD

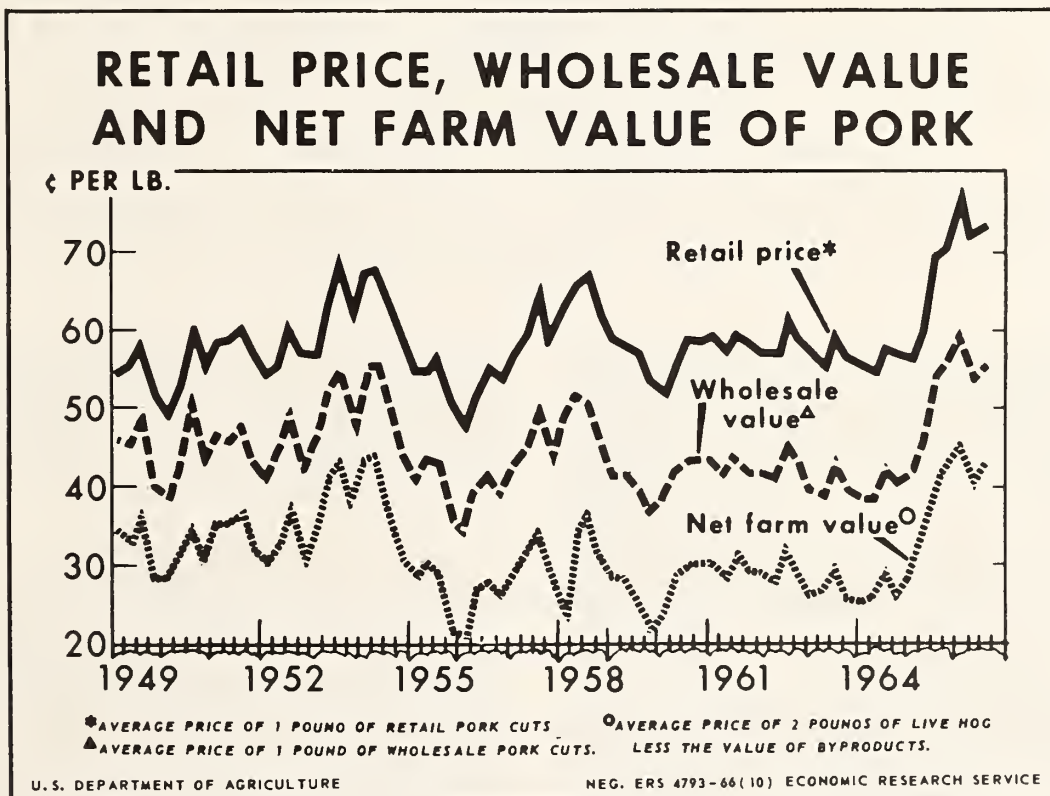J F M A M J J A S O N D   J F M A M J J A S O N D

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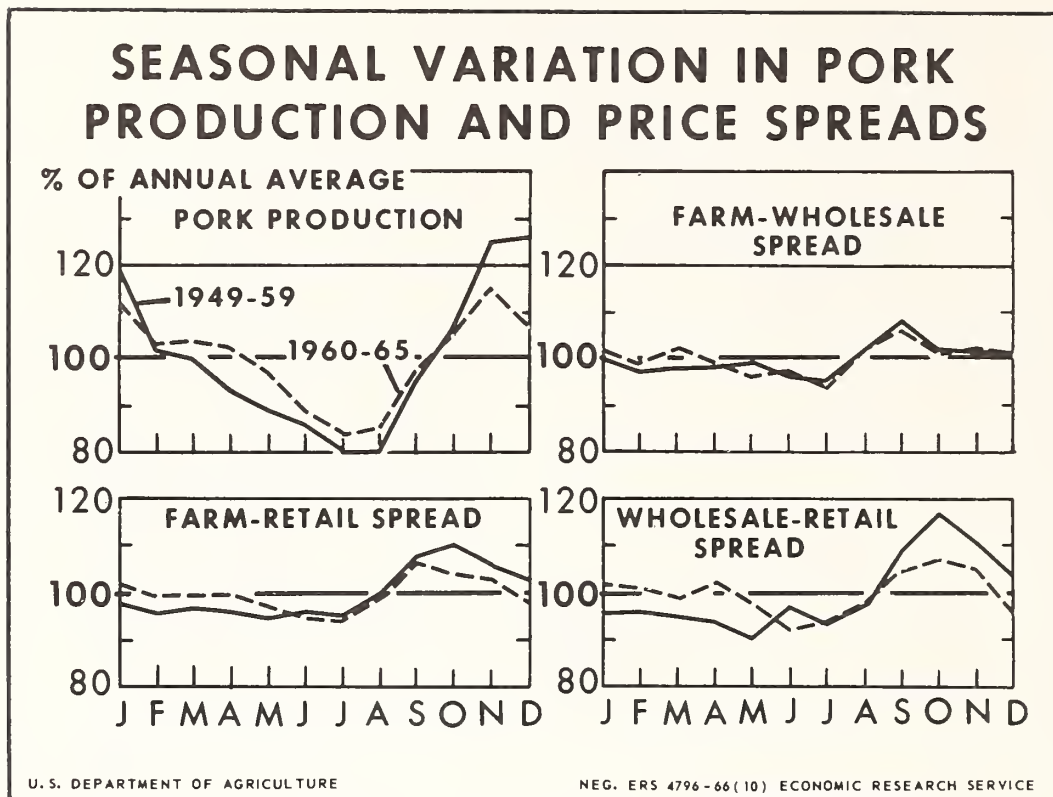
Figure 4

to reach the seasonal low in November, about the same time as live-hog prices. The seasonal high for retail prices was in August, and the low was in the late fall. In 1960-65, a balancing of fall and spring pig crops and a tendency toward more year-round farrowings smoothed seasonal marketing variations to some extent. The timing of the seasonal high and low did not change, but the difference between the two was reduced, chiefly by a damping of the seasonal high in late fall.

This change in marketings caused a shift in the seasonal hog and pork price patterns, and a reduction in the degree of price variations. Farm prices were lowest and relatively stable from January through April. Wholesale prices showed a corresponding change--the seasonal decline from August to December was considerably less than in 1949-59--shifting the seasonal low point from late fall to early spring. A shift in the seasonal low point from late fall to early spring also occurred in re-

tail prices. The seasonal high shifted from August to September--2 months later than the peak in farm prices, and 1 month later than the peak in wholesale prices.

Cyclical Variation

The timelags between hog prices and size of pig crop, and between size of pig crop and pork production are cyclical in nature. Hog prices in one period affect the size of the pig crop in the following period which, in turn, determines the number of hogs slaughtered. The number slaughtered affects the price of hogs which, in turn, influences the next pig crop--and the cycle continues. The lag appears to be about 1.3 years for each phase, producing a 4-year cycle.

This cycle, which has long been an economic landmark, led to some of the earliest price analyses. However, it is often disrupted. For

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PORK PRODUCTION: DEVIATIONS FROM TREND
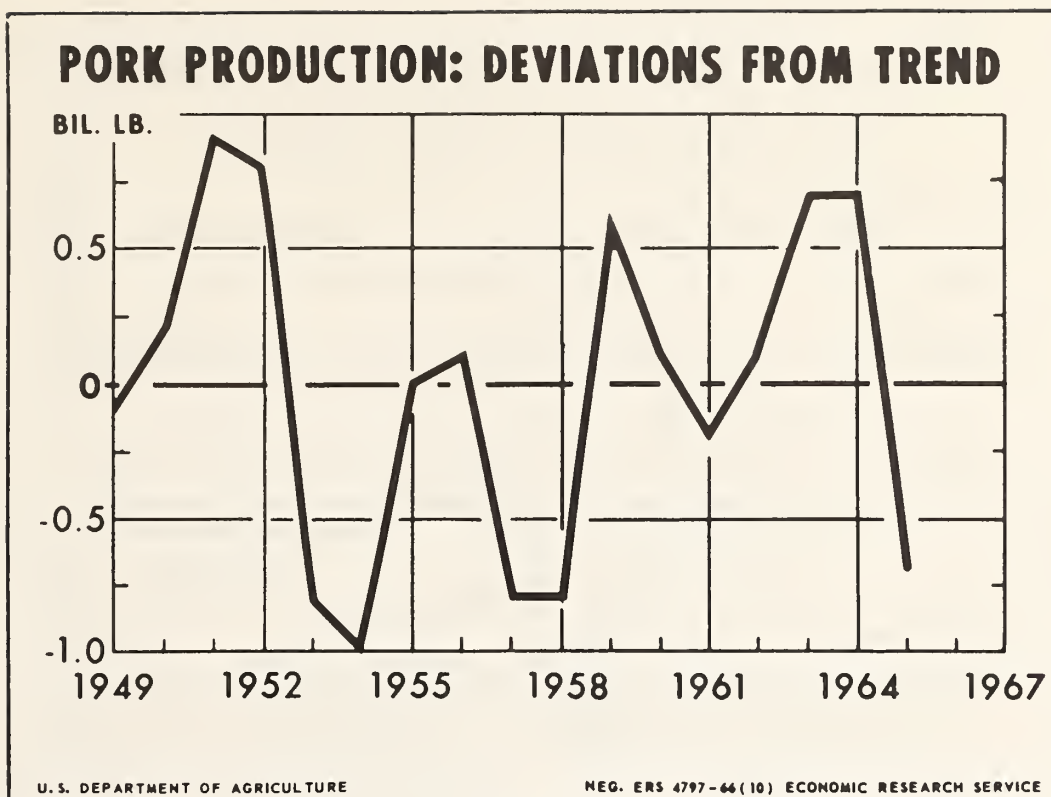
Figure 5

example, fluctuations in the corn supply--due primarily to the weather--often create random disturbances in the cycle. In the postwar years, however, the price support program and favorable weather have contributed to the ac- cumulation of large stocks of feed grains and the development of relatively stable corn prices. As a result, the pattern of 4-year cycles was quite pronounced in 1949-65 (fig. 5).

THE SPREAD BETWEEN HOG AND PORK PRICES

As discussed above, price comparisons divide the total farm-retail price spread into a farm-wholesale spread and a wholesale-retail spread. (These spreads are the difference between farm and wholesale, or wholesale and retail prices, on an equivalent retail-weight basis.)

Two types of movement have been noted in price spreads for pork: (1) month-to-month fluctuations (short-run price adjustments) and (2) a long-run trend of increasing spreads between farm and retail prices. The short-run fluctuations are discussed below as they relate to dynamic conditions in the market. The long-run trends in increasing price spreads are discussed in terms of the farm-wholesale and wholesale-retail spreads.

Short-Run Price Adjustments

Seasonal changes in the farm-retail spread tend to be inversely related to seasonal changes in farm and retail pork prices. As hog

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SEASONAL VARIATION IN PORK PRODUCTION AND PRICES

% OF ANNUAL AVERAGE

PORK PRODUCTION
1949-59
1960-65

RETAIL PRICES

NET FARM INCOME

WHOLESALE VALUE

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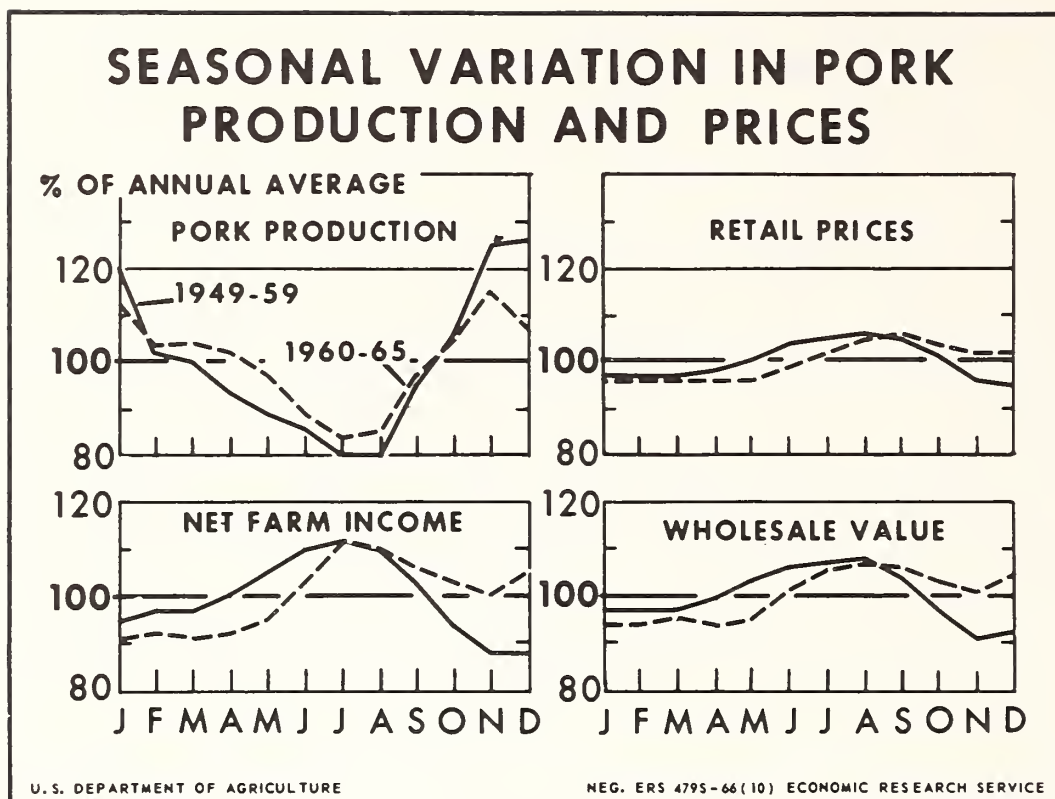
Figure 6

marketings drop seasonally, farm prices increase more rapidly than retail prices, and the farm-retail spread narrows (table 2 and fig. 6). Conversely, when hog marketings are increasing seasonally, farm prices drop more rapidly than retail prices and the spread widens.

Changes in retail and wholesale prices are usually less than changes in livestock prices, and tend to lag about 1 month behind the changes in live-hog prices (fig. 3). Retail and farm prices may be reacting to different supply changes at a given time. Over- or under-adjustments in prices occur constantly as buyers and sellers misjudge changing market conditions. As the length of time over which prices are averaged increases, these adjustments average out. Annually averaged spreads show little fluctuation and reflect only an upward trend.

The lag between hog and pork prices and the subsequent impact on the price spread is observed both when prices are rising and when they are falling (table 2). Other short-run factors which contribute to the general cyclical pattern of changes in response to changes in supply and demand are (1) the length of time required for a change in supply to move from the live-hog level to the retail level; (2) the retailers' preference for stable prices, and dependence upon special sales to move increases in supply of short duration; and (3) storage of cured and processed pork.

It should be noted that these factors are interrelated. For example, because stored products are available, prices are steadier. During the fall when relatively large quantities of pork are stored, a change in supply brings less immediate pressure at the wholesale and retail levels than it does at the farm level. During the spring and summer, the movement of pork products out of storage increases pork supply relative to farm marketings.

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TABLE 2.--Variations in the retail price of pork per pound and in value [2] of the live-hog equivalent, 1954-66

PERIODS OF RISING PRICES

Retail pork price per pound [1]		Value of 2 pounds live hog [2]		Lag between time live-hog prices changed direction and retail pork prices followed	
Period	Change in price	Period	Change in value	Beginning	End
	Cents per pound		Cents per pound	Months	Months
Apr. 1955 – July 1955	3.9	Mar. 1955 – June 1955	7.2	1	1
Jan. 1956 – Sept. 1956	9.2	Dec. 1955 – Aug. 1956	11.1	1	1
Nov. 1956 – Aug. 1957	13.8	Nov. 1956 – Aug. 1957	12.4	0	0
Nov. 1957 – July 1958	10.9	Nov. 1957 – July 1958	12.1	0	0
Feb. 1960 – Sept. 1961	9.1	Dec. 1959 – Aug. 1961	12.1	2	1
May 1962 – Sept. 1962	7.0	April 1962 – Sept. 1962	5.1	1	0
May 1963 – Aug. 1963	5.2	April 1963 – July 1963	9.4	1	1
May 1964 – Sept. 1964	5.0	April 1964 – July 1964	6.0	1	2
Dec 1964 – Feb. 1966	22.6	Nov. 1964 – Dec. 1965	28.0	1	2
Average	9.6		11.5	0.9	0.9

PERIODS OF FALLING PRICES

Period	Change in price	Period	Change in value	Beginning	End
	Cents per pound		Cents per pound	Months	Months
May 1954 – April 1955	-15.0	April 1954 – Mar. 1955	-22.4	1	1
July 1955 – Jan. 1956	-10.6	June 1955 – Dec. 1955	-17.4	1	1
Sept. 1956 – Nov. 1956	- 2.8	Aug. 1956 – Nov. 1956	- 3.7	1	0
Aug. 1957 – Nov. 1957	- 8.8	Aug. 1957 – Nov. 1957	- 7.9	0	0
July 1958 – Feb. 1960	-17.1	July 1958 – Dec. 1959	-22.2	0	2
Sept. 1961 – May 1962	- 3.5	Aug. 1961 – April 1962	- 3.8	1	1
Sept. 1962 – May 1963	- 9.6	Sept. 1962 – April 1963	- 9.8	0	1
Aug. 1963 – May 1964	- 5.3	July 1963 – April 1964	- 8.0	1	1
Sept. 1964 – Dec. 1964	- 3.4	July 1964 – Nov. 1964	- 5.2	2	1
Feb. 1966 – May 1966	- 7.2	Dec. 1965 – May 1966	-11.5	2	0
Average	- 8.3		-11.2	0.9	0.8

[1] Weighted average price of retail cuts of pork.
[2] Equal in value to 2 pounds of live hog at Chicago.

Long-Run Price Adjustments

Farm-Wholesale Spread

The farm-wholesale spread accounted for about 47 percent of the total farm-retail spread in 1966. This spread covers the cost of services between the sale of hogs by the farmer and the retail store, including transportation, marketing, slaughtering, curing, and processing. Unlike beef, pork usually is sold by meat packers in wholesale cuts and not as carcasses. Only a small portion of these cuts, primarily loins and ribs, are sold fresh. The other cuts are cured or otherwise further processed.

The pork carcass is frequently cut and cured at the packing plant, and many retail cuts of pork are sold in the same form at retail as at wholesale. Retailers buy pork products such as hams, Boston butts, picnics, sliced bacon, and sausage, which require little or no cutting and trimming before they are suitable for sale at retail. Because most of the cutting, curing, and processing operations are performed by the packer or wholesaler, the farm-wholesale price spread for pork is greater than for either beef or lamb.

The difference between the price for live hogs and the wholesale price for pork is the estimated farm-wholesale price spread. It is a rough approximation of the combined slaughtering, processing, and other marketing costs.

Although wholesale pork and live-hog prices have followed generally parallel long-run trends, changes have not always been of the same magnitude nor has the timing of changes been the same. Live-hog prices have tended to respond rapidly when there have been either sharp increases or decreases in the number of hogs slaughtered. Wholesale price changes in response to these changed conditions have generally been of a lesser magnitude than changes in live-hog prices, particularly in response to very short-run supply changes. Wholesale price changes have also tended to lag behind changes in live-hog prices. Much of this lag is probably normal market pipeline time. Demand changes have been of smaller magnitude and more gradual or long run than changes in supply, and their impact on prices

has been more difficult to observe and measure. Changes in demand are reflected in the opposite direction (from retailer to hog producer) from supply changes. Price changes in response to changes in supply or demand were not separated nor estimated in this study; but the estimated prices and price spreads as measured over the time reflect changes in both demand and supply of pork.

The general trend of the farm-wholesale spread was upward between 1949 and 1959 at a rate of about 0.3 cent per year (fig. 7). However, exceptions occurred in years of relatively small hog marketings. In general, the farm-wholesale spread tends to widen when hog marketings increase and to narrow when marketings decrease.

From 1960 to 1966, the spread remained about constant at 13.2 cents per pound. This stability probably resulted from the relative stability of farm and wholesale prices since 1959, and improved technology in slaughtering and meatpacking. The sharp increase in prices during the latter part of 1965 and early 1966 did not result in any substantial change in this margin.

Increases in the farm-wholesale spread appear to be the result of several factors. The number of services performed by the marketing and processing industry has increased, as well as the cost of labor, materials, and transportation. However, in some cases these costs have been offset by increases in meatpacking efficiency resulting from improved technology. The exact effects of increased services, rising costs, and improved technology relative to price spreads were not determined. No attempt was made to estimate the extent to which rising price spreads are the result of increased costs or increased profits, or both.

Structural changes in the livestock marketing and slaughtering industries may also have contributed to the reduced upward trend in the farm-wholesale spread. Direct purchases by packers from hog producers have increased, tending to reduce marketing cost. About 60 percent of the hogs sold for slaughter in 1963 were sold directly to the packer, bypassing terminals and other organized markets. Beginning in the late fifties, packers began to close

PRICE SPREAD FOR PORK
Farm-Retail and Farm-Wholesale

¢ PER LB.

Farm-retail

Farm-wholesale

1949 1952 1955 1958 1961 1964

QUARTERLY DATA.

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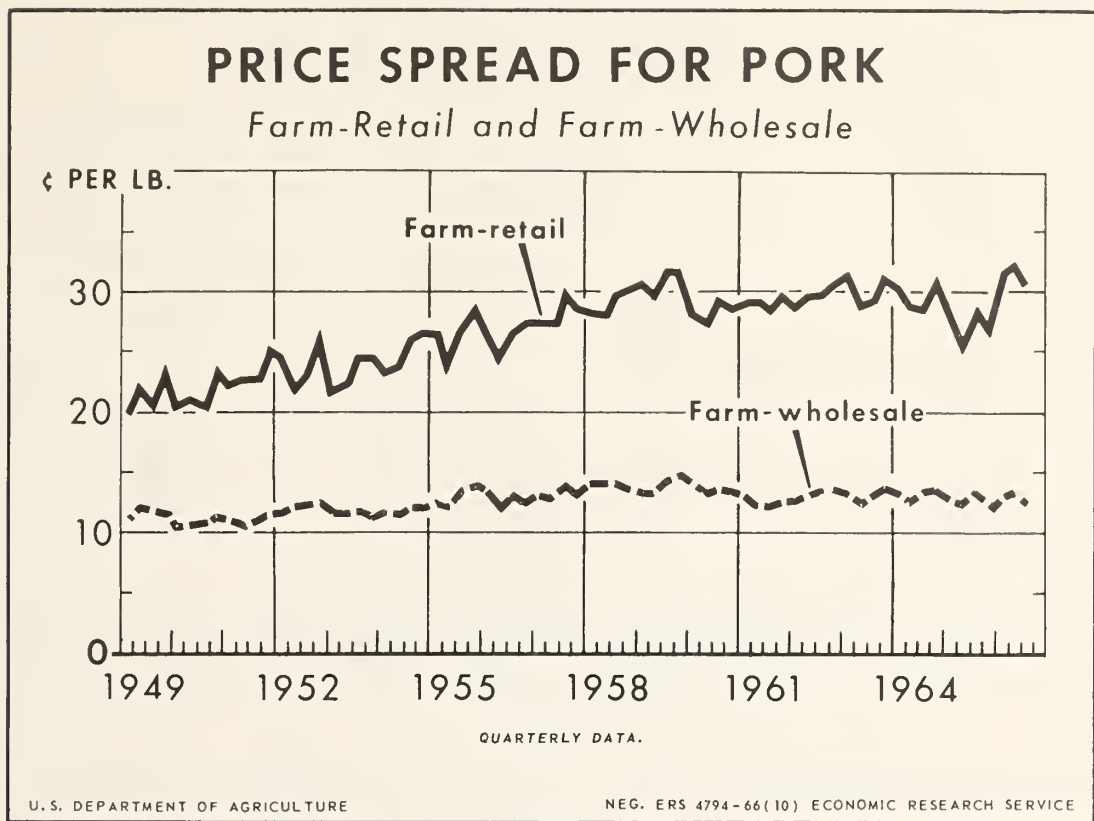
Figure 7

antiquated plants and to build new plants nearer the sources of live hogs. This not only facilitated rapid adoption of new technology, but also reduced transportation costs, since it costs less to transport pork carcasses or primal cuts than live hogs.

Specialization has increased within the slaughtering and processing industry. Hog slaughtering and pork processing have traditionally been a joint process, with the packer both purchasing live hogs and selling wholesale pork cuts. Today, an increasing number of specialized processors purchase pork carcasses from specialized slaughterers. This and other types of specialization have contributed to the reduction of the cost of slaughtering and processing.

Wholesale-Retail Spread

The wholesale-retail spread accounted for about 53 percent of the total farm-retail spread in 1965 and 58 percent in 1966. This spread covers retailing costs such as advertising, overhead, labor, some cutting and trimming, and weight loss due to trimming and shrinkage.

The seasonal nature of the wholesale-retail spread is quite evident. Both wholesale and retail pork prices usually increase during the spring and summer when hog marketings are declining, and decline in the fall in response to increased hog marketings. Although the trends in retail and wholesale prices of pork are generally parallel, wholesale prices tend to respond more quickly than retail prices to short-run variations in hog marketings, resulting in erratic month-to-month fluctuations in the wholesale-retail spread.

To avoid frequent price changes, retailers often ignore small wholesale price changes in setting retail prices until definite clear-cut trends are observed. The primary reason is because such an adjustment might significantly reduce their volume of sales. Retailers who hold the line on retail price while their competitors adjust prices upward may increase

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PRICE SPREAD FOR PORK
Farm-Retail and Wholesale-Retail
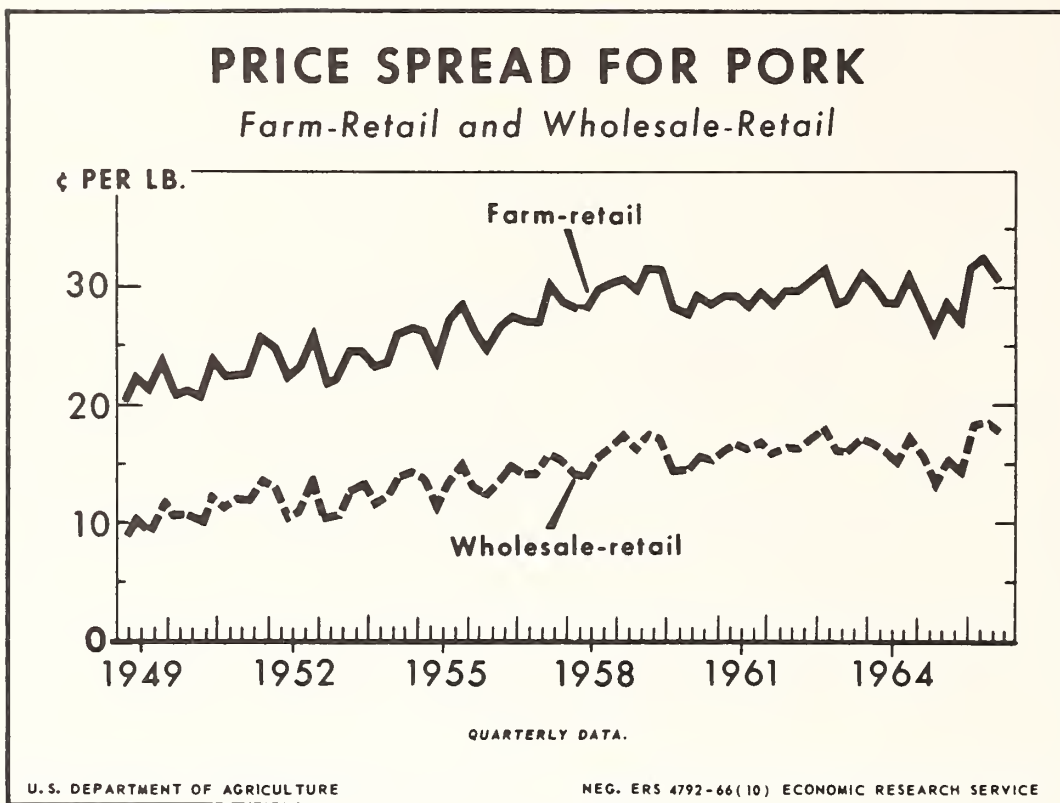
Figure 8

volume of sales to offset the effect of lower price spread per unit. The tendency to hold retail prices steady when wholesale prices are advancing results in a narrowing of the wholesale-retail price spread.

During periods of declining wholesale prices, retailers are understandably reluctant to lower prices until compelled to do so by their competition. Such periods are usually associated with a widening of the spread.

Thus, over periods of increasing and decreasing prices, wholesale-retail spreads usually do not decline as much as they increase. An example is the general upward trend in the wholesale-retail spread during 1949-59, a period of widely fluctuating prices. The average annual increase during the period was about 0.6 cent per pound (fig. 8).

After 1960 the spread remained steady at around 16.0 cents per pound, through 1964. This stability was largely due to the relative stability of pork prices at all three levels of the marketing system. Sharp increases in farm, wholesale, and retail prices in late 1965 and early 1966 brought an end to this

stability, and the spread increased to over 18 cents per pound in 1966.

Wholesale-retail price spreads for all meats have trended upward at a nearly constant rate since 1949, and only pork spreads leveled off after 1959. One explanation is the effect of the changing distribution of consumers' expenditures for meat. Beef and pork accounted for about 90 percent of the total red meat consumed throughout the 1949-66 period. Beef and pork were consumed in about equal amounts in 1949; but between 1949 and 1966 pork consumption dropped from about 47 percent to 37 percent, while beef consumption increased from 44 to 59 percent. Since beef is higher priced than pork, the effect on the proportion of dollar sales has been even greater. The rapid increase in beef relative to pork sales may have prompted retailers to shift part of their overhead expenses from pork to beef.

Trends in the Farm-Retail Spread

The total cost of marketing pork increased from 40 to 49.8 percent of the consumer's pork dollar between 1949 and 1966 (table 3).

TABLE 3.--Pork: Retail price, wholesale value, farm value, farm-retail price spread, and farmer's share, by quarters, 1949-66

Year and quarter	Retail price per pound [1]	Whole-sale value [2]	Gross farm value [3]	By-product allow-ance [4]	Net farm value[5]	Farm-retail spread			Farmer's share
						Total	Whole-sale-retail	Farm-whole-sale	
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent
1949									
Jan.-Mar.	54.8	46.0	39.7	5.2	34.5	20.3	8.8	11.5	63
Apr.-June	55.7	45.6	38.1	4.7	33.4	22.3	10.1	12.2	60
July-Sept	58.2	49.0	42.1	5.1	37.0	21.2	9.2	12.0	64
Oct.-Dec.	51.7	40.0	32.4	4.3	28.1	23.6	11.7	11.9	54
Average	55.1	45.3	38.1	4.9	33.2	21.9	9.9	12.0	60
1950									
Jan.-Mar.	49.1	38.7	32.2	4.0	28.2	20.9	10.4	10.5	57
Apr.-June	52.7	42.1	36.1	4.6	31.5	21.2	10.6	10.6	60
July-Sept	60.6	50.6	45.8	6.1	39.7	20.9	10.0	10.9	66
Oct.-Dec.	55.2	42.9	36.9	5.5	31.4	23.8	12.3	11.5	57
Average	54.4	43.6	37.8	5.1	32.7	21.7	10.8	10.9	60
1951									
Jan.-Mar.	58.2	46.8	42.6	6.9	35.7	22.5	11.4	11.1	61
Apr.-June	58.4	46.3	42.2	6.6	35.6	22.8	12.1	10.7	61
July-Sept	59.7	47.8	43.3	6.5	36.8	22.9	11.9	11.0	62
Oct.-Dec.	57.5	43.6	38.0	5.9	32.1	25.4	13.9	11.5	56
Average	58.4	46.1	41.5	6.5	35.0	23.4	12.3	11.1	60
1952									
Jan.-Mar.	54.3	41.3	34.5	4.9	29.6	24.7	13.0	11.7	55
Apr.-June	55.3	45.0	37.7	4.8	32.9	22.4	10.3	12.1	59
July-Sept.	60.5	49.5	42.0	4.9	37.1	23.4	11.0	12.4	61
Oct.-Dec.	56.9	43.2	34.7	4.0	30.7	26.2	13.7	12.5	54
Average	56.7	44.8	37.2	4.6	32.6	24.1	11.9	12.2	57
1953									
Jan.-Mar.	56.6	46.4	38.8	4.1	34.7	21.9	10.2	11.7	61
Apr.-June	63.4	52.7	46.1	5.0	41.1	22.3	10.7	11.6	65
July-Sept.	68.5	55.7	49.9	6.0	43.9	24.6	12.8	11.8	64
Oct.-Dec.	62.2	48.8	43.7	6.1	37.6	24.6	13.4	11.2	60
Average	62.6	50.9	44.6	5.3	39.3	23.3	11.7	11.6	63
1954									
Jan.-Mar.	67.1	55.3	50.5	6.9	43.6	23.5	11.8	11.7	65
Apr.-June	67.9	55.7	51.1	7.0	44.1	23.8	12.2	11.6	65
July-Sept.	63.3	49.4	43.5	6.2	37.3	26.0	13.9	12.1	59
Oct.-Dec.	57.8	43.4	36.5	5.2	31.3	26.5	14.4	12.1	54
Average	64.0	50.9	45.4	6.3	39.1	24.9	13.1	11.8	61

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Year and quarter	Retail price per pound [1]	Whole- sale value [2]	Gross farm value [3]	By- product allow- ance [4]	Net farm value [5]	Farm-retail spread			Farmer's share
						Total	Whole- sale- retail	Farm- whole- sale	
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent
1955									
Jan.-Mar.	54.7	41.0	32.8	4.4	28.4	26.3	13.7	12.6	52
Apr.-June	54.8	43.5	35.8	4.5	31.3	23.5	11.3	12.2	57
July-Sept.	56.5	43.2	33.5	4.0	29.5	27.0	13.3	13.7	52
Oct.-Dec.	50.6	35.6	25.2	3.5	21.7	28.9	15.0	13.9	43
Average	54.1	40.8	31.8	4.1	27.7	26.4	13.3	13.1	51
1956									
Jan.-Mar.	47.2	34.0	24.2	3.4	20.8	26.4	13.2	13.2	44
Apr.-June	51.6	39.2	31.5	4.3	27.2	24.4	12.4	12.0	53
July-Sept.	55.0	41.5	32.6	4.3	28.3	26.7	13.5	13.2	51
Oct.-Dec.	53.8	39.1	31.1	4.7	26.4	27.4	14.7	12.7	49
Average	51.9	38.5	29.8	4.1	25.7	26.2	13.4	12.8	50
1957									
Jan.-Mar.	56.6	42.5	34.3	4.9	29.4	27.2	14.1	13.1	52
Apr.-June	59.2	45.0	36.7	4.7	32.0	27.2	14.2	13.0	54
July-Sept.	65.2	49.2	40.3	5.1	35.2	30.0	16.0	14.0	54
Oct.-Dec.	59.0	43.5	34.8	4.6	30.2	28.8	15.5	13.3	51
Average	60.0	45.1	36.5	4.8	31.7	28.3	14.9	13.4	53
1958									
Jan.-Mar.	62.8	48.6	39.5	5.0	34.5	28.3	14.2	14.1	55
Apr.-June	65.9	51.9	43.2	5.4	37.8	28.1	14.0	14.1	57
July-Sept.	67.2	51.5	42.8	5.4	37.4	29.8	15.7	14.1	56
Oct.-Dec.	62.0	45.5	36.7	4.8	31.9	30.1	16.5	13.6	51
Average	64.5	49.4	40.5	5.1	35.4	29.1	15.1	14.0	55
1959									
Jan.-Mar.	58.9	41.5	32.1	4.0	28.1	30.8	17.4	13.4	48
Apr.-June	58.0	41.6	32.0	3.9	28.1	29.9	16.4	13.5	48
July-Sept.	57.1	39.5	28.5	3.3	25.2	31.9	17.6	14.3	44
Oct.-Dec.	53.6	36.3	24.8	3.1	21.7	31.9	17.3	14.6	40
Average	56.9	39.7	29.4	3.6	25.8	31.1	17.2	13.9	45
1960									
Jan.-Mar.	52.1	37.9	27.2	3.3	23.9	28.2	14.2	14.0	46
Apr.-June	56.0	41.6	32.1	3.8	28.3	27.7	14.4	13.3	51
July-Sept.	59.0	43.1	33.6	4.1	29.5	29.5	15.9	13.6	50
Oct.-Dec.	58.8	43.3	34.3	4.4	29.9	28.9	15.5	13.4	51
Average	56.5	41.5	31.8	3.9	27.9	28.6	15.0	13.6	49

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TABLE 3.--Pork: Retail price, wholesale value, farm value, farm-retail price spread, and farmer's share, by quarters, 1949-66--Continued

Year and quarter	Retail price per pound [1]	Whole-sale value [2]	Gross farm value [3]	By-product allow-ance [4]	Net farm value [5]	Farm-retail spread			Farmer's share
						Total	Whole-sale-retail	Farm-whole-sale	
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent
1961									
Jan.-Mar.	59.4	43.2	34.9	4.7	30.2	29.2	16.2	13.0	51
Apr.-June	58.1	41.3	33.3	4.4	28.9	29.2	16.8	12.4	50
July-Sept.	59.9	43.7	35.8	4.3	31.5	28.4	16.2	12.2	53
Oct.-Dec.	58.6	41.7	33.0	4.0	29.0	29.6	16.9	12.7	49
Average	59.0	42.5	34.3	4.4	29.9	29.1	16.5	12.6	51
1962									
Jan.-Mar.	57.7	41.7	33.1	4.2	28.9	28.8	16.0	12.8	50
Apr.-June	57.6	41.1	31.9	4.0	27.9	29.7	16.5	13.2	48
July-Sept.	62.0	45.6	36.4	4.3	32.1	29.9	16.4	13.5	52
Oct.-Dec.	59.8	42.7	33.2	4.2	29.0	30.8	17.1	13.7	48
Average	59.3	42.8	33.6	4.1	29.5	29.8	16.5	13.3	50
1963									
Jan.-Mar.	57.5	39.3	29.9	3.9	26.0	31.5	18.2	13.3	45
Apr.-June	55.3	39.0	30.3	3.8	26.5	28.8	16.3	12.5	48
July-Sept.	59.4	43.3	34.2	4.0	30.2	29.2	16.1	13.1	51
Oct.-Dec.	56.8	39.7	29.5	3.7	25.8	31.0	17.1	13.9	45
Average	57.3	40.3	31.0	3.9	27.1	30.2	17.0	13.2	47
1964									
Jan.-Mar.	55.6	38.9	29.2	3.8	25.4	30.2	16.7	13.5	46
Apr.-June	54.8	38.7	29.8	3.9	25.9	28.9	16.1	12.8	47
July-Sept.	58.0	42.9	33.5	4.1	29.4	28.6	15.1	13.5	51
Oct.-Dec.	57.1	39.7	30.3	4.2	26.1	31.0	17.4	13.6	46
Average	56.4	40.0	30.7	4.0	26.7	29.7	16.4	13.3	47
1965									
Jan.-Mar.	56.8	41.3	32.9	4.5	28.4	28.4	15.5	12.9	50
Apr.-June	59.7	46.2	38.8	5.1	33.7	26.0	13.5	12.5	56
July-Sept.	69.7	54.2	46.6	5.8	40.8	28.9	15.5	13.4	59
Oct.-Dec.	70.7	56.2	50.1	6.4	43.7	27.0	14.5	12.5	62
Average	64.3	49.5	42.1	5.5	36.6	27.7	14.8	12.9	57
1966									
Jan.-Mar.	78.1	59.6	53.3	7.0	46.3	31.8	18.5	13.3	59
Apr.-June	72.4	53.7	46.1	6.3	39.8	32.6	18.7	13.9	55
July-Sept.	73.6	55.6	49.4	6.4	43.0	30.6	18.0	12.6	58

[1] Weighted average price of hams, bacon, loins, picnics, sausage, butts, spareribs, and bacon squares calculated from prices collected by the Bureau of Labor Statistics, U.S. Dept. of Labor.

[2] Weighted average calculated from wholesale prices of individual products at Chicago, collected by the Livestock Division, Consumer and Marketing Service, U.S. Department of Agriculture.

[3] Payment to farmer for 2.0 lb. of live hog.

[4] Portion of gross farm value attributed to lard and to other edible and inedible byproducts.

[5] Gross farm value minus byproduct allowance.

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The spread increased rather steadily between 1949 and 1959, from 21.9 cents to 31.1 cents, or about 0.9 cent per year (fig. 8). From 1960-65, the spread varied slightly around an average of 29.2 cents per pound. In 1966, it increased to 31.7 cents.

The wholesale-retail spread--accounting for 67 percent of the total increase during 1949-59--has increased at a much faster rate than the farm-retail or farm-wholesale spreads. It accounted for 53 percent of the total spread in 1965 and 58 percent in 1966, compared with 45 percent in 1949.

While it is not possible to determine the exact cause of the increase in the farm-retail spread, one contributing factor which should be noted is the rising cost of providing additional consumer services. For example, today's consumer demands a leaner, more closely trimmed cut of pork than he did 10 years ago; this has been provided, but at an additional cost.

EXAMPLES OF MARKETING COSTS
AND GROSS RETURNS

The following are six examples which illustrate the actual steps and specific costs involved in marketing hogs from farm to retail:

(1) An Illinois farm to consumers in New York City, April 1964.
(2) An Iowa farm to consumers in Washington, D.C., July 1964.
(3) An Indiana farm to consumers in Boston, December 1964.
(4) A Nebraska farm to consumers in Los Angeles, April 1965.
(5) An Iowa farm to consumers in New York City, July 1965.
(6) An Illinois farm to consumers in Chicago, May 1966.

These examples are not intended to suggest the returns which might be expected on similar farms. Neither are they intended to suggest that a particular production and marketing program is superior to other programs, or that a particular marketing system or channel is superior to others. Each one should be considered strictly as an individual example of marketing from a selected farm to a particular market at a particular time.

Figure 9 shows the estimated distribution of the consumer's dollar spent for pork in each of the examples. It is important to note that marketing is a dynamic process, and had the farmer in any one of the examples marketed his hogs a month earlier or a month later, the results might not only have been different for all concerned, but the distribution in figure 9 might have been changed substantially as well.

Figure 9

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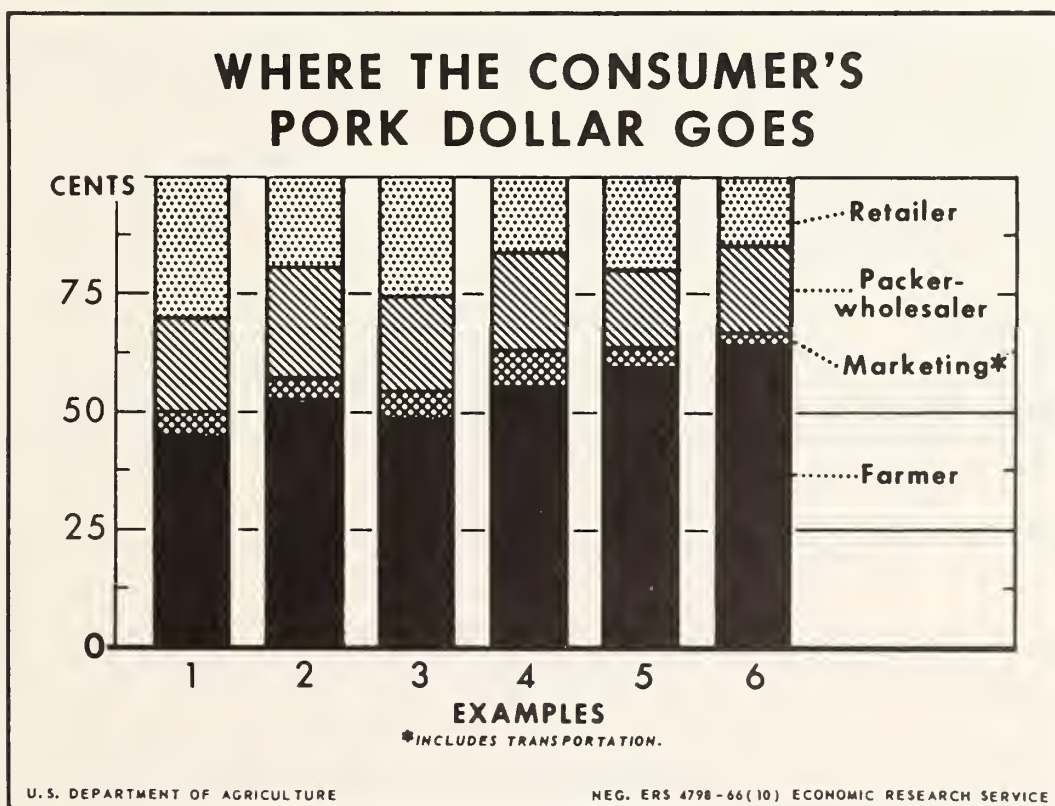
Example 1.--Hog from Farm in Illinois to Retail in New York City

This illustration assumes that a farmer in Illinois shipped his butcher hogs, averaging 220 pounds, by truck to a terminal public market at Chicago in April 1964. The hogs were sold to a local packer. The packer then shipped the 110 pounds of wholesale cuts derived from each hog to a retailer in New York City who sold 106 pounds of retail cuts to local consumers.

Estimated Marketing Costs and Gross Returns:

Return to farmer

Sale value of 220-pound hog at Chicago, April 1964, at $15.31 per cwt. $33.68

    Less marketing expense:
        Shipping hog from farm to Chicago. . . . . $.66
        Expenses at market. . . . . $.95

Total marketing expense . . . . $ 1.61

Gross return to farmer. $32.07

Return to packer-wholesaler

Sale value of 110 pounds pork cuts (excluding lard) at New York City, April 1964,
    at $39.40 per 100 pounds $43.34
Less expense of shipping wholesale cuts from Chicago to New York City . . . . $ 1.69
Net received from sale of pork. $41.65
Cost of 220-pound hog at Chicago, April 1964, at
    $15.31 per cwt. $33.68
Less value of lard and inedible byproducts . . . . $ 4.48
Value of hog less value of lard and byproducts. $29.20
Gross return to packer-wholesaler $12.45

Return to retailer

Sale value of 106 pounds of retail pork cuts, excluding lard, at New York City,
    April 1964, at $59.12 per cwt. $62.67
Less cost of 110 pounds of wholesale pork cuts $43.34
Gross return to retailer $19.33

Distribution of the Consumer's Pork Dollar

	Percent
Retailing.	30.8
Packer-wholesaler.	19.9
Transportation.	3.8
Marketing.	1.5
Return to producer.	44.0
	100.0

Example 2.--Hog from Farm in Iowa to Retail in Washington, D.C.

This example assumes that a farmer in Iowa shipped his butcher hogs, averaging 215 pounds, direct to a packing plant in Waterloo, Iowa, in July 1964. The packer shipped the 108 pounds of wholesale cuts derived from each hog to a retailer in Washington, D.C. The retailer sold 104 pounds of retail cuts to local consumers.

Estimated Marketing Costs and Gross Returns:

Return to farmer

Sale value of 215-pound hog at Waterloo, Iowa, July 1964, at $17.12 per cwt.	$36.81
Less trucking expense from farm to packing plant at Waterloo..................	$ .65
Gross return to farmer....................................	$36.16

Return to packer-wholesaler

Sale value of 108 pounds pork cuts (excluding lard) at Washington, D.C., July 1964, at $45.10 per 100 pounds		$48.71
Less expense of shipping wholesale cuts from Waterloo to Washington.		$ 2.13
Net received from sale of pork......................................		$46.58
Cost of 215-pound hog at Waterloo, July 1964, at $17.12 per 100 pounds	$36.81	
Less value of lard and inedible byproducts	$ 4.52	
Value of live hog less value of lard and byproducts........................		$32.29
Gross return to packer-wholesaler		$14.29

Return to retailer

Sale value of 104 pounds of retail pork cuts (excluding lard) at Washington, July 1964, at $58.36 per 100 pounds	$60.69
Less cost of 108 pounds of wholesale pork cuts	$48.71
Gross return to retailer	$11.98

Distribution of the Consumer's Pork Dollar

	Percent
Retailing...	19.7
Packer-wholesaler...	23.6
Transportation..	4.6
Return to producer..	52.1
	100.0

Example 3.--Hog from Farm in Indiana to Retail in Boston

This illustration assumes that a farmer in Indiana shipped his butcher hogs, averaging 215 pounds, by truck to a terminal public market at Indianapolis in December 1964. The hogs were purchased and slaughtered by a local packer. The packer then shipped the 108 pounds of wholesale cuts derived from each hog to a retailer in Boston. The retailer sold 104 pounds of retail cuts to local consumers.

Estimated Market Costs and Gross Returns:

Return to farmer

Sale value of 215-pound hog at Indianapolis, December 1964, at $16.84 per cwt.		$36.21
Less marketing expense:		
Shipping hog from farm to Indianapolis	$.65	
Expenses at market	$.86	
Total marketing expense		$ 1.51
Gross return to farmer		$34.70

Return to packer-wholesaler

Sale value of 108 pounds pork cuts (excluding lard) at Boston, December 1964,		
at $42.40 per cwt.		$45.79
Less expense of shipping wholesale cuts from Indianapolis to Boston.		$ 1.91
Net received from sale of pork		$43.88
Cost of 215-pound hog at Indianapolis, December 1964,		
at $16.84 per cwt.	$36.21	
Less value of lard and inedible byproducts	$ 4.52	
Value of hog less value of lard and byproducts.		$31.69
Gross return to packer-wholesaler		$12.19

Return to retailer

Sale value of 104 pounds of retail pork cuts, excluding lard, at Boston,	
December 1964, at $60.23 per cwt.	$62.64
Less cost of 108 pounds of wholesale pork cuts	$45.79
Gross return to retailer	$16.85

Distribution of the Consumer's Pork Dollar

	Percent
Retailing.	26.9
Packer-wholesaler	19.5
Transportation.	4.0
Marketing.	1.4
Return to producer	48.2
	100.0

Example 4.--Hog from Farm in Nebraska to Retail in Los Angeles

This example assumes that a farmer in Nebraska shipped his butcher hogs, averaging 220 pounds, by truck to a terminal public market at Omaha in April 1965. The hogs were slaughtered and processed by a local packer. The 110 pounds of wholesale cuts of pork derived from each hog were shipped by the packer to Los Angeles. A retailer in Los Angeles then sold 106 pounds of retail cuts to local consumers.

Estimated Marketing Costs and Gross Returns:

Return to farmer

Sale value of 220-pound hog at Omaha, April 1965, at $18.16 per cwt.		$39.95
Less marketing expense:		
Shipping hog from farm to Omaha.	$.66	
Expense at market.	$.86	
Total marketing expense		$ 1.52
Gross return to farmer.		$38.43

Return to packer-wholesaler

Sale value of 110 pounds pork cuts (excluding lard) at Los Angeles, April 1965		
at $45.05 per cwt.		$49.56
Less expense of shipping wholesale cuts from Omaha to Los Angeles		$ 3.17
Net received from sale of pork.		$46.39
Cost of 220-pound hog at Omaha, April 1965 at		
$18.16 per cwt.	$39.95	
Less value of lard and inedible byproducts	$ 5.39	
Value of hog less value of lard and byproducts.		$34.56
Gross return to packer-wholesaler		$11.83

Return to retailer

Sale value of 106 pounds of retail pork cuts, excluding lard, at Los Angeles,	
April 1965, at $55.81 per cwt.	$59.16
Less cost of 110 pounds of wholesale pork cuts	$49.56
Gross return to retailer	$ 9.60

Distribution of the Consumer's Pork Dollar

	Percent
Retailing.	16.2
Packer-wholesaler.	20.0
Transportation.	6.5
Marketing.	1.5
Return to producer.	55.8
	100.0

Example 5.--Hog from Farm in Iowa to Retail in New York City

This example assumes that a farmer in Iowa shipped his butcher hogs, averaging 220 pounds, direct to a packing plant in Waterloo, Iowa, in July 1965. The packer then shipped the 110 pounds of wholesale cuts derived from each hog to a retailer in New York City, who sold 106 pounds of retail cuts to local consumers.

Estimated Market Costs and Gross Returns:

Sale value of 220-pound hog at Waterloo, July 1965, at $24.07 per cwt.	$52.95
Less trucking expense from farm to packing plant at Waterloo.	$ .66
Gross return to farmer	$52.29

Return to packer-wholesaler

Sale value of 110 pounds pork cuts (excluding lard) at New York City, July 1965 at $55.29 per cwt.	$60.82
Expense of shipping wholesale cuts from Waterloo to New York City.	$ 2.18
Net received from sale of pork.	$58.64
Cost of 220-pound hog at Waterloo, July 1965, at $24.07 per cwt. $52.95	
Less value of lard and inedible byproducts . . . . $ 6.57	
Value of hog less value of lard and byproducts.	$46.38
Gross return to packer-wholesaler	$12.26

Return to retailer

Sale value of 106 pounds of retail pork cuts, excluding lard, at New York City, July 1965, at $72.45 per cwt.	$76.80
Less cost of 110 pounds of wholesale pork cuts	$60.82
Gross return to retailer	$15.98

Distribution of the Consumer's Pork Dollar

	Percent
Retailing.	20.8
Packer-wholesaler.	16.0
Transportation.	3.7
Return to producer.	59.5
	100.0

Example 6.--Hog from Farm in Illinois to Retail in Chicago

The example assumes that a farmer in Illinois shipped his butcher hogs, averaging 215 pounds, by truck to a terminal public market in Chicago in May 1966. The hogs were purchased and slaughtered by a local packer. The 108 pounds of wholesale pork cuts derived from each hog were sold to a retailer in Chicago. The retailer then sold 104 pounds of retail cuts to local consumers.

Estimated Marketing Costs and Gross Returns:

Return to farmer

Sale value of 215-pound hog at Chicago, May 1966, at $25.36 per cwt.		$54.52
Less marketing expense:		
Shipping hog from farm to Chicago	$.65	
Expenses at market	$.95	
Total marketing expense		$ 1.60
Gross return to farmer		$52.92

Return to packer-wholesaler

Sale value of 108 pounds pork cuts (excluding lard) at Chicago, May 1966, at $55.37 per cwt.		$59.80
Cost of 215-pound hog at Chicago, May 1966, at $25.36 per cwt.	$54.52	
Less value of lard and inedible byproducts	$ 7.77	
Value of hog less value of lard and byproducts.		$46.75
Gross return to packer-wholesaler		$13.05

Return to retailer

Sale value of 104 pounds of retail pork cuts, excluding lard at Chicago, May 1966, at $68.60 per cwt.	$71.34
Less cost of 108 pounds of wholesale pork cuts	$59.80
Gross return to retailer	$11.54

Distribution of the Consumer's Pork Dollar

	Percent
Retailing	16.2
Packer-wholesaler	18.3
Transportation	.9
Marketing	1.3
Return to producer	63.3
	100.0

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